

Listing of the Claims:

1.(Original) A method of automatically configuring and authenticating a client device installed in a data network access device at a user's premises, said network access device including an Internet Protocol (IP) router that routes IP signaling between a remote data network and a plurality of users connected to the network access device at the premises, said method comprising the steps of:

preprogramming the client device with a common key set;

requesting access to the remote data network by the client device using the preprogrammed common key set for authentication purposes;

determining by an authenticator in the network whether the common key set is valid;

providing the client device with limited network access, said limited access enabling the client device to access only a registration server, upon determining that the common key set is valid;

accessing the registration server;

sending a new user key set to the client device;

automatically requesting access to the remote data network by the client device using the new user key set for authentication purposes;

determining by the authenticator whether the new user key set is valid; and

providing the client device with full network access, upon determining that the new user key set is valid.

2. (Original) The method of claim 1 wherein the step of requesting access to the remote data network by the client device using the common key set for authentication purposes includes automatically requesting access to the remote data network by the client device using the common key set for authentication purposes when the client device is installed in the network access device.

3. (Original) The method of claim 1 wherein the registration server is associated with the common key set in an authentication database, and the step of providing the client device with limited network access includes providing the client device with access only to a registration server associated with the common key set received from the client device.

4. (Original) The method of claim 1 wherein the step of sending a new user key set to the client device includes the steps of:

automatically assigning the new user key set by the registration server; and

sending the new user key set from the registration server to the client device.

5. (Original) The method of claim 4 wherein the step of sending a new user key set to the client device also includes sending the new user key set from the registration server to the authenticator.

6. (Original) The method of claim 1 wherein the step of sending a new user key set to the client device includes sending a new user key set from the authenticator to the client device.

7. (Original) The method of claim 1 wherein the step of accessing the registration server includes registering one of the users with the registration server, said registering step including selecting the new user key set by the registering user.

8. (Original) The method of claim 7 wherein the step of sending a new user key set to the client device includes sending the new user key set selected by the user from the registration server to the client device and to the authenticator.

9. (Original) The method of claim 1 wherein the step of automatically requesting access to the remote data network by the client device using the new user key set for authentication purposes includes the steps of:

receiving the new user key set in the client device;

authenticating by the client device that the new user key set is received from a valid source; and

automatically requesting access to the remote data network by the client device using the new user key set, upon authenticating that the new user key set is received from a valid source.

10. (Currently amended) A system for automatically configuring and authenticating a client device installed in a data network access device at a user's premises, said network access device operably connected to a registration server and including an Internet Protocol (IP) router that routes IP signaling between a remote data network and a plurality of users connected to the network access device at the premises, said system comprising:

a client device comprising:

means for storing a preprogrammed common key set;

means for requesting access to the remote data network utilizing the preprogrammed common key set for authentication purposes when the client device is installed in the network access device; and

means for automatically requesting access to the remote data network utilizing a new user key set for authentication purposes, said new user key set being received during a registration process;

an authenticator in the network comprising:

means for determining whether the common key set is valid, and providing the client device with limited network access enabling the client device to access ~~only a~~ only the registration server, upon determining that the common key set is valid; and

means for determining whether the new user key set is valid, and providing the client device with full network

access, upon determining that the new user key set is valid;
and

~~a registration~~ the registration server for registering the
client device in the network, and sending a new user key set to the
client device.

11. (Original) The system of claim 10 wherein the authenticator
includes an authentication database that associates a plurality of
common key sets with a plurality of registration servers.

12. (Original) The system of claim 10 wherein the client device
also includes means for authenticating that the new user key set is
received from a valid source.

13. (Original) The system of claim 10 wherein the client device
utilizes the Point-to-Point Protocol (PPP) for signaling with the
authenticator and registration server.

14. (Original) The system of claim 13 wherein the client device
is installed in a Customer Premises Equipment (CPE) comprising a
Digital Subscriber Line (DSL) modem and IP router.

15. (Currently amended) A client device installed in a data network access device at a user's premises, said network access device including an Internet Protocol (IP) router that routes IP signaling between a remote data network and a plurality of users connected to the network access device at the premises, said client device comprising:

means for storing a preprogrammed common key set;

means for requesting access to the remote data network utilizing the preprogrammed common key set for authentication purposes when the client device is installed in the network access device;

means for conducting a registration session with a registration server;

means for receiving a new user key set from the network registration server;

means for replacing the common key set with the received new user key set; and

means responsive to receiving the new user key set for automatically requesting access to the remote data network utilizing the new user key set for authentication purposes.

16. (Original) The client device of claim 15 further comprising means for authenticating that the new user key set is received from a valid source.

17. (Original) The client device of claim 15 wherein the client device utilizes the Point-to-Point Protocol (PPP) for signaling with the authenticator and registration server.

18. (Original) The client device of claim 17 wherein the client device is installed in a Customer Premises Equipment (CPE) comprising a Digital Subscriber Link (DSL) modem and IP router.